

In the claims

Claim 1. **(Currently Amended)** A liposome having a bilayer comprising a lipid component which comprises a compound having the formula

$R^1-Y^1-CHZ^1-CH(NY^2Y^3)-CH^2-Z^2$, wherein:

R^1 is a straight-chained alkyl, alkenyl or alkynyl group having from 5 to 19 carbon atoms in the aliphatic chain;

Y^1 is $-CH=CH-$, $-C\equiv C-$ or $-CH(OH)CH(OH)-$;

Z^1 is OH or a conversion-inhibiting group;

Y^2 is H, a phenyl group, an alkyl-substituted phenyl group having from 1 to about 6 carbon atoms in the alkyl chain, or an alkyl chain having from 1 to 6 carbon atoms;

Y^3 is H or a group having the formula $-C(O)R^2$ or $-S(O)_2R^2$;

R^2 is a straight-chained alkyl moiety selected from the group consisting of $-(CH_2)_3CH_3$, $-(CH_2)_5CH_3$, $-(CH_2)_7CH_3$ and $-(CH_2)_9CH_3$, or an alkenyl group or alkynyl group having from 2 to 23 carbon atoms in the aliphatic chain;

Z^2 is OH or a phosphorylcholine attachment-inhibiting group selected from the group consisting of $-X^1$, $-OX^1$, $-X^2X^3$ and $-OX^2X^3$;

X^1 is selected from the group consisting of $-C(O)H$, $-CO_2H$, CH_3 , $C(CH_3)_3$, $Si(CH_3)_3$, $SiCH_3(C(CH_3)_3)_2$, $Si(C(CH_3)_3)_3$, $Si(PO_4)_2C(CH_3)_3$, a phenyl group, an alkyl-substituted phenyl group having from 1 to 6 carbon atoms in the alkyl chain, an alkyl chain having from 1 to 6 carbon atoms, an amino group, a fluorine atom, a chlorine atom, and a group having the formula $C(R^3R^4)OH$;

X^2 is selected from the group consisting of CH_2- , $C(CH_3)_2-$, $Si(PO_4)_2-$, $Si(CH_3)_2-$, $SiCH_3PO_4-$, $C(O)-$ and $S(O)_2-$;

X^3 is selected from the group consisting of $-C(O)H$, $-CO_2H$, $-CH_3$, $-C(CH_3)_3$, $-Si(CH_3)_3$, $-SiCH_3(C(CH_3)_3)_2$, $-Si(C(CH_3)_3)_3$, $-Si(PO_4)_2C(CH_3)_3$, a phenyl group, an alkyl-substituted phenyl group having from 1 to 6 carbon atoms in the alkyl chain, an alkyl chain having from 1 to 6 carbon atoms, an amino moiety, a chlorine atom, a fluorine atom, or a group having the formula $C(R^3R^4)OH$, wherein each of R^3 and R^4 is independently an alkyl chain having from 1 to 6 carbon atoms, a phenyl group or an alkyl-substituted phenyl group having from 1 to 6 carbon atoms in the alkyl chain;

wherein when Z^2 is an amino group, R^2 is an aliphatic chain having from 12 to 9 or from 19 to 23 carbon atoms in the aliphatic chain;

and wherein the compound comprises at least about 5 mole percent of the lipid component.

Claim 2. **(Original)** The liposome of claim 1, wherein R^1 is $CH_3(CH_2)_{12}$, Y^1 is $-CH=CH-$ and Y^2 is H.

Claim 3. **(Original)** The liposome of claim 1, wherein Y^3 is $-C(O)(CH_2)_4CH_3$.

Claim 4. **(Original)** The liposome of claim 1, wherein the conversion-inhibiting group is $-OSi(CH_3)_2C(CH_3)_3$.

Claim 5. **(Original)** The liposome of claim 1, wherein the compound has the formula $CH_3(CH_2)_{12}-CH=CH-CH_2Z^1-CH(NHY^3)-CH_2-Z^2$.

Claim 6. **(Currently Amended)** The liposome of claim 5, wherein Y^3 is $-C(O)(CH_2)_4CH_4CH_3$ and wherein Z^2 is $-OC(O)CH_3$, $-OC(O)CH_2CH_2CH_3$, $-OC(O)CH(CH_3)CH_3$, or $-OSi(CH_3)_2C(CH_3)_3$.

Claim 7. **(Original)** The liposome of claim 1, wherein the compound comprises at least about 10 mole percent of the lipid.

Claim 8. **(Original)** The liposome of claim 1 comprising an additional bioactive agent.

Claim 9. **(Currently Amended)** The liposome of claim 1, wherein the lipid further comprises vitamin D³.

Claim 10. **(Original)** The liposome of claim 9, wherein vitamin D³ comprises about 1 mole percent of the lipid.

Claim 11. **(Original)** The liposome of claim 1, wherein the lipid further comprises a headgroup modified lipid.

Claim 12. **(Original)** The liposome of claim 1 which is dehydrated.

Claim 13. **(Currently Amended)** A pharmaceutical composition comprising the liposome of claim 1.

Claim 14. **(Original)** A method of administering a bioactive liposome to an animal which comprises administering to the animal the pharmaceutical composition of claim 13.

Claim 15. **(Original)** The method of claim 14, wherein the animal is afflicted with a cancer and wherein the amount of the composition administered comprises at least about 0.1 mg of the compound per kg of the animal's body weight.

Claims 16-78. **(Canceled)**

Claim 79. **(Previously Presented)** The method of claim 15, wherein the cancer is a brain, breast, lung, ovarian, colon, stomach or prostate cancer.

Claim 80. **(Previously Presented)** The method of claim 15, wherein the cancer is a sarcoma, carcinoma, neuroblastoma, glioma or drug resistant cancer

Claim 81. **(Previously Presented)** The method of claim 14, wherein the animal is a human.

Claim 82. **(Previously Presented)** The liposome of claim 1, wherein Z¹ is OH or a conversion-inhibiting group selected from the group consisting of -X¹, -OX¹, -X²X³ and -OX²X³.

Claim 83. **(Previously Presented)** The liposome of claim 1, wherein R^2 is an alkyl moiety selected from the group consisting of $-(CH_2)_3CH_3$, $-(CH_2)_5CH_3$, $-(CH_2)_7CH_3$ and $-(CH_3)_9CH_3$.

Claim 84. **(Previously Presented)** The liposome of claim 1, wherein R^1 is $CH_3(CH_2)_{12}-$.

Claim 85. **(Previously Presented)** The liposome of claim 1, wherein Y^1 is $-CH=CH-$.

Claim 86. **(Previously Presented)** The liposome of claim 1, wherein Y^2 is H.

Claim 87. **(Previously Presented)** The liposome of claim 1, wherein Y^3 is $-C(O)R^2$.

Claim 88. **(Previously Presented)** The liposome of claim 1, wherein Z^1 is OH.

Claim 89. **(Previously Presented)** The liposome of claim 88, wherein Z^2 is a group having the formula $-X^2X^3$ or $-O-X^2X^3$.

Claim 90. **(Previously Presented)** The liposome of claim 89, wherein Z^2 is $-OC(O)CH_3$, $-OC(O)CH_2CH_2CH_3$, $-OC(O)CH(CH_3)CH_3$ or $-OSi(CH_3)_2C(CH_3)_3$.

Claim 91. **(Previously Presented)** The liposome of claim 90, wherein Z^2 is $-OSi(CH_3)_2C(CH_3)_3$.

Claim 92. **(Previously Presented)** The liposome of claim 88, wherein Z^2 is a group having the formula $-X^1$ or $-OX^1$.

Claim 93. **(Previously Presented)** The liposome of claim 1, wherein Z^1 a conversion-inhibiting group selected from the group consisting of $-X^1$, $-OX^1$, $-X^2X^3$ and $-OX^2X^3$.

Claim 94. **(Previously Presented)** The liposome of claim 93, wherein the conversion-inhibiting group is $-OC(O)CH_3$, $-OC(O)CH_2CH_2CH_3$, $-OC(O)CH(CH_3)CH_3$ or $-OSi(CH_3)_2C(CH_3)_3$.

Claim 95. **(Previously Presented)** The liposome of claim 1, wherein the compound having the formula $R^1-Y^1-CHZ^1-CH(NY^2Y^3)-CH_2-Z^2$ is $CH_3-(CH_2)_{12}-CH=CH-CH_2Z^1CH(NHY^3)-CH_2Z^2$.

Claim 96. **(Previously Presented)** The liposome of claim 95, wherein Z^1 is OH and Y^3 is a group having the formula $-C(O)R^2$.

Claim 97. **(Previously Presented)** The liposome of claim 96, wherein Y^3 is $-C(O)(CH_2)_4CH_3$.

Claim 98. **(Previously Presented)** The liposome of claim 87, wherein Z^2 is $-OSi(CH_3)_2C(CH_3)_3$, $-OSi(PO_4)_2C(CH_3)_3$, $-C(O)CH_3$ or $-OC(O)CH_2CH_2CH_3$.

Claim 99. **(Previously Presented)** The liposome of claim 1, wherein the bilayer comprises at least about 10 mole percent of the compound having the formula $R^1-Y^1-CHZ^1-CH(NY^2Y^3)-CH_2-Z^2$.